



## METHOD AND APPARATUS FOR IMPARTING CURVES IN IMPLANTABLE ELONGATED MEDICAL INSTRUMENTS

## ABSTRACT OF THE DISCLOSURE

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Elongated medical instruments adapted to be permanently or temporarily implanted in the mammalian body or used to access a site in the body to facilitate introduction of a further medical device, and methods and apparatus for deflecting the distal end and imparting curves in distal segments of such medical instruments within the body by manipulation of a proximal segment of the instrument outside the body are disclosed. Multiple portions of distal segments of a single one or distal segments of coaxially arranged distal segments of deflectable coiled wires are formed each having a line of spacers each functioning as a backbone along a side of the wire coil and formed in a variety of ways. One or more elongated movable wire extends through a coil lumen to one or more attachment point distal to each portion that can be pushed to widen and/or pulled to narrow the spacing of coil turns across the coil diameter from the line to induce a bend in all more proximal portions.